April 10, 2019

President Donald J. Trump
The White House
1600 Pennsylvania Ave NW
Washington, DC 20500

Subject: PP-438 Central Maine Power's Proposed New England Clean Energy Corridor (NECEC)

Dear President Trump,

Central Maine Power (CMP) has applied for a Presidential Permit to construct, operate, maintain, and connect an electrical transmission line across the United States border with Canada.

On behalf of the residents of Maine's Second Congressional District I am asking that you require the U.S. Army Corps of Engineers (USACE) of the New England District in Maine to expand its environmental assessment (EA) to include the Gulf of Maine and to assess how it has been impacted by the long-term storage of the spring runoff by HydroQuebec's reservoir hydroelectric facilities.

In an April 1, 2019 statewide poll done by Natural Resources Council of Maine, 65% of Mainers oppose the project with only 15% expressing support.

CMP has narrowly defined the scope of this project as a 145 mile transmission line corridor carrying "clean energy" from the Canadian border to its substation in Lewiston, Maine.

CMP has made the long-term storage of the cold nutrient enriched waters of the spring runoff part of its application by submitting the HydroQuebec December 14, 2018 letter to Maine's PUC with the following misleading statement: "Excess water not used to generate electricity is stored in large reservoirs for use in later periods. As the reservoirs become full, and storing water is no longer an option, water is spilled."

Misleading, because this long term storage has reversed the natural and seasonal river flows of spring and winter, which has led to the starvation of the federally listed endangered Atlantic salmon and North Atlantic right whale, cod and other fisheries in the Gulf of Maine to the point of depletion. All of this has been documented in the attached April 2, 2019 letter to Mr. Jay Clement of USACE.

Maine's Department of Environmental Protection (DEP) will not expand the scope of CMP's application to include the Gulf of Maine and the USACE has told my daughter that they have been told not to include the Gulf of Maine.

I suspect that USACE and DEP do not realize that before 1969, the Gulf of Maine, which is Essential Fish Habitat (EFH) for the federally endangered Atlantic salmon and North Atlantic right whale, was the beneficiary of a four month long fresh water tsunami out of the Gulf of St Lawrence and Hudson Bay.

The average volume of this Gulf of St. Lawrence tsunami was calculated in the 1970s by Dr. Hans Neu, a Canadian oceanographer, at 282,300 cubic feet per second, which is equivalent to 3 and one-third Niagara Falls! "Niagara Falls has a flow rate of 84,756 cubic feet per second, which is the highest rate of flow for any water fall in the world!" (Wikipedia) This amount of flow would fill Maine's Moosehead Lake in seven and a half days. Moosehead Lake is 118 square miles in size with an average depth of 55 feet.

Historically, another offshore tsunami flowed thru James and Hudson Bays, and was at least twice the size of the one described above. The volume of water witheld for long- term storage from this watershed is equivalent to six and two thirds Niagara Falls.

From 1969 to 1993, HydroQuebec built 7 mega-reservoir hydroelectric facilities, and all of this energy and water has been removed from the natural water cycle.

Naturally, before long term storage of the spring runoff, there were two off shore tsunami's. These colossal water flows were the driving force of onshore tsunami's of strong upwelling currents pumping dissolved silicate and other essential nutrients of the deep sea waters up onto the Labrador, Northeast Newfoundland and Scotia Shelves and into the Gulfs of Maine and St. Lawrence via the Northeast and Laurentian Channel, respectively.

A study of the environmental impacts of long-term storage by HydroQuebec's reservoir hydroelectricity facilities on coastal thermohaline currents have never been done by Canada or Quebec.

Since the 1970s, these governments have been muzzling those scientists with the courage to predict that these reservoir facilities would starve the fisheries and warm the oceans and climate.

> "Reducing the flow of fresh water during spring and summer and increasing it during the winter changes the seasonal composition of the water in the surface layer and the seasonal strength of the density current… There is a definite possibility that both winter and summer temperatures of the surface layer will increase; in winter due to an increase in upwelling of deeper warmer water, and in summer due to slower surface currents which will allow the surface layer to absorb more heat during its passage through the system." (Dr. Neu, 1982)
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> And, "Runoff is transferred from the biologically active to the biologically inactive period of the year. This is analogous to stopping the rain during the growing season and

irrigating during the winter, when no growth occurs." (Dr. Hans Neu 1982) The passage of time has proven all of Dr. Neu's predictions to be correct.

From 1948 to 2010, the global storage capacity of reservoirs grew from about 500 to greater than 6,000 cubic kilometers (Gleick 2012). This would be the equivalency of eliminating the amount of water and energy of 150 Niagara Falls for four months from the natural pump of the worldwide thermohaline circulation.

Conclusion

It took millennia for the natural water cycle to develop along with the critical spring runoff from Canada that delivers the nutrients necessary to support our fisheries in the Gulf of Maine.

In 50 years, HydroQuebec has destroyed this equilibrium by withholding 50 to 70 percent of the spring runoff to maximize winter generation when power demand is at its maximum.

The cumulative impact of such a huge reduction in the spring runoff has led to a sharp decline in early 1990's of the population of the now-endangered Maine Atlantic salmon and North Atlantic right whale, cod and many other fisheries to the point of depletion in the Gulfs of Maine and St. Lawrence and the northwest Atlantic.

Before these dams were built, the spring runoff lowered the salinity at Cabot Strait by as much as 3 percent from mid-May through mid-October as measured by Dr. Neu using 1960-1976 salinity data.

The advocates of hydroelectricity blame the declines in the fisheries on the burning of fossil fuels and ignore the epic amount of water and energy which has been suppressed by HydroQuebec's reservoir facilities.

Both the strength of the regional thermohaline currents and the worldwide thermohaline circulation is directly correlated to the strength of the spring runoff.

A July 2018 article "Tiny Copepod Causes Quivers in Gulf of Maine Food Web" documents that the abundance of Calamus finmarchicus, a cold-water copepod is declining and contributing to the starvation of the right whale et. al. fisheries. Jeffery Runge of the Gulf of Maine Research Institute was quoted: "The cause of the decline in copepods is unclear. It's hard to say whether it is due to a long-term climate change or if it is a local event." (Landings 7/22/18)

Since the oil embargo of the 1970's, we have been told that hydroelectricity is clean energy. (see Proposed CMP NECEC Project is Not "Environmentally Clean" Energy by S. Kasprzak, submitted to DEP March 2019)

It is inconceivable to the advocates of large reservoir hydroelectric facilities that these facilities are contributing to climate change and starvation of the fisheries.

A solid case can be made that the proliferation of reservoir hydroelectric facilities and flow regulation may be the driving factor in the starvation of the salmon and other fisheries and a major, if not the driving factor in the warming of the oceans and atmosphere, and especially the accelerated warming of the Gulf of Maine.

Mr. President, I ask that you deny a Presidential Permit for CMP's NECEC, until an EA has been done on the impacts of HydroQuebec's long-term storage on the Gulf of Maine, which is EFH for Atlantic salmon and North Atlantic right whale.

With your help, we can **Make Atlantic Salmon Great Again** and save the right whale!

Thanks for your consideration,

Stephen M. Kasprzak

Cc: Jay Clement, USACE
Senator Susan Collins
Senator Angus King
Representative Chellie Pingree
Representative Jared Golden
Bruce Poliquin
Bangor Daily News
Portland Press Herald